RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/565/85

Source: TFWP

Date Processed by STIC: 1-27-06

ENTERED



IFWP

RAW SEQUENCE LISTINGPATENT APPLICATION: **US/10/565,185**DATE: 01/27/2006

TIME: 15:01:23

Input Set : A:\LEA 36823.txt

```
3 <110> APPLICANT: Bayer HealthCare AG
             Ellinghaus, Peter
     4
             Munter, Klaus
     5
      7 <120> TITLE OF INVENTION: Potassium channels with atrium-selective expression
      9 <130> FILE REFERENCE: Le A 36 823
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/565,185
C--> 11 <141> CURRENT FILING DATE: 2006-01-18
     11 <160> NUMBER OF SEQ ID NOS: 24
     13 <170> SOFTWARE: PatentIn version 3.3
     15 <210> SEO ID NO: 1
     16 <211> LENGTH: 1901
     17 <212> TYPE: DNA
     18 <213> ORGANISM: Homo Sapiens
     20 <400> SEQUENCE: 1
     21 gggcaggaag acggcgctgc ccggaggagc ggggcgggcg ggcgcgcggg ggagcgggcg
                                                                               60
     23 gegggeggga gecaggeeeg ggegggggeg gggeggegg ggeeagaaga ggeggeggge
                                                                              120
     25 cgcgctccgg ccggtctgcg gcgttggcct tggctttggc tttggcggcg gcggtggaga
                                                                              180
     27 agatgctgca gtccctggcc ggcagctcgt gcgtgcgcct ggtggagcgg caccgctcgg
                                                                              240
                                                                              300
     29 cctggtgctt cggcttcctg gtgctgggct acttgctcta cctggtcttc ggcgcagtgg
                                                                              360
     31 tetteteete ggtggagetg ceetatgagg acetgetgeg ceaggagetg egcaagetga
     33 agcgacgctt cttggaggag cacgagtgcc tgtctgagca gcagctggag cagttcctgg
                                                                              420
     35 gccgggtgct ggaggccagc aactacggcg tgtcggtgct cagcaacgcc tcgggcaact
                                                                              480
                                                                              540
     37 ggaactggga cttcacctcc gcgctcttct tcgccagcac cgtgctctcc accacaggtt
     39 atggccacac cgtgcccttg tcagatggag gtaaggcctt ctgcatcatc tactccgtca
                                                                              600
                                                                              660
     41 ttggcattcc cttcaccctc ctgttcctga cggctgtggt ccagcgcatc accgtgcacg
                                                                              720
     43 teaccegeag geeggteete taetteeaea teegetgggg etteteeaag eaggtggtgg
     45 ccatcgtcca tgccgtgctc cttgggtttg tcactgtgtc ctgcttcttc ttcatcccgg
                                                                              780
     47 ccgctgtctt ctcagtcctg gaggatgact ggaacttcct ggaatccttt tatttttgtt
                                                                              840
     49 ttatttccct gagcaccatt ggcctggggg attatgtgcc tggggaaggc tacaatcaaa
                                                                              900
     51 aattcagaga getetataag attgggatea egtgttaeet getaettgge ettattgeea
                                                                              960
     53 tgttggtagt tctggaaacc ttctgtgaac tccatgagct gaaaaaattc agaaaaatgt
                                                                             1020
     55 tctatgtgaa gaaggacaag gacgaggatc aggtgcacat catagagcat gaccaactgt
                                                                             1080
     57 ccttctcctc gatcacagac caggcagctg gcatgaaaga ggaccagaag caaaatgagc
                                                                             1140
     59 cttttgtggc cacccagtca tctgcctgcg tggatggccc tgcaaaccat tgagcgtagg
                                                                             1200
     61 atttgttgca ttatgctaga gcaccagggt cagggtgcaa ggaagaggct taagtatgtt
                                                                             1260
     63 catttttatc agaatgcaaa agcgaaaatt atgtcacttt aagaaatagc tactgtttgc
                                                                             1320
     65 aatgtcttat taaaaaacaa caaaaaaaga cacatggaac aaagaagctg tgaccccagc
                                                                             1380
     67 aggatgtcta atatgtgagg aaatgagatg tccacctaaa attcatatgt gacaaaatta
                                                                             1440
     69 totogacott acataggagg agaatacttg aagcagtatg otgotgtggt tagaagcaga
                                                                             1500
     71 ttttatactt ttaactggaa actttggggt ttgcatttag atcatttagc tgatggctaa
                                                                             1560
                                                                             1620
     73 ataqcaaaat ttatatttaq aaqcaaaaaa aaaaagcata gagatgtgtt ttataaatag
     75 gtttatgtgt actggtttgc atgtacccac ccaaaatgat tatttttgga gaatctaagt
                                                                             1680
                                                                             1740
     77 caaactcact atttataatg cataggtaac cattaactat gtacatataa agtataaata
```

Input Set : A:\LEA 36823.txt

79 tgtttatatt ctgtacatat ggtttaggtc accagatcct agtgtagttc tgaaactaag 81 actatagata ttttgtttct tttgatttct ctttatacta aagaatccag agttgctaca 83 ataaaataag gggaataata aacttgagag tgaataacca t 86 <210> SEQ ID NO: 2	1800 1860 1901			
87 <211> LENGTH: 22				
88 <212> TYPE: DNA				
89 <213> ORGANISM: artificial sequence				
91 <220> FEATURE:				
92 <223> OTHER INFORMATION: primer 1				
94 <400> SEQUENCE: 2				
95 tgaagaagga caaggacgag ga	22			
98 <210> SEQ ID NO: 3				
99 <211> LENGTH: 20				
100 <212> TYPE: DNA				
101 <213> ORGANISM: Artificial sequence				
103 <220> FEATURE: 104 <223> OTHER INFORMATION: primer 2				
104 <2235 OTHER INFORMATION: primer 2 106 <400> SEQUENCE: 3				
107 gcctggtctg tgatcgagga	20			
110 <210> SEQ ID NO: 4				
111 <211> LENGTH: 27				
112 <212> TYPE: DNA				
113 <213> ORGANISM: artificial sequence				
115 <220> FEATURE:				
116 <223> OTHER INFORMATION: probe				
118 <400> SEQUENCE: 4	27			
19 caggtgcaca tcatagagca tgaccaa				
22 <210> SEQ ID NO: 5				
123 <211> LENGTH: 2590				
124 <212> TYPE: DNA 125 <213> ORGANISM: Homo Sapiens				
123 <213 ORGANISM: HOMO SAPIENS 127 <400> SEQUENCE: 5				
128 tgccctgcgc ggagagcggc gagcgcagcc atgccccagg ccgcctccgg ggcagcagca	60			
130 geggeggeeg gggeegatge gegggeeggg ggegeegggg ggeeggegge ggeeegggeg	120			
132 ggacgatgaa gcggcagaac gtgcgcacgc tggcgctcat cgtgtgcacc ttcacctacc	180			
134 tgctggtggg cgccgcggtc ttcgacgcgc tggagtcgga gcccgagctg atcgagcggc	240			
136 agcggctgga gctgcggcag caggagctgc gggcgcgcta caacctcagc cagggcggct	300			
138 acgaggaget ggagegete gtgetgegee teaageegea caaggeegge gtgeagtgge	360			
140 gettegeegg eteettetae ttegecatea eegteateae eaceategge taegggeaeg	420			
142 cggcacccag cacggatggc ggcaaggtgt tctgcatgtt ctacgcgctg ctgggcatcc	480			
144 cgctcacgct cgtcatgttc cagagcctgg gcgagcgcat caacaccttg gtgaggtacc	540			
146 tgctgcaccg cgccaagaag gggctgggca tgcggcgcc cgacgtgtcc atggccaaca	600			
148 tggtgctcat cggcttcttc tcgtgcatca gcacgctgtg catcggcgcc gccgccttct	660 720			
150 cccactacga gcactggacc ttcttccagg cctactacta ctgcttcatc accctcacca 152 ccatcggctt cggcgactac gtggcgctgc agaaggacca ggccctgcag acgcagccgc	720			
152 dealeggett eggegaetae geggegetge agaaggaeea ggeeetgeag aegeageege 154 agtaegtgge etteagette gtetacatee ttaegggeet caeggteate ggegeettee	840			
154 agracetogt ggtgctgcgc ttcatgacca tgaacgccga ggacgagaag cgcgacgccg	900			
158 agcaccgcgc gctgctcacg cgcaacgggc aggcgggcgg cggcggaggg ggtggcagcg	960			
160 cgcacactac ggacaccgcc tcatccacgg cggcagcggg cggcggcggc ttccgcaacg	1020			

Input Set : A:\LEA 36823.txt

```
162 tetacgegga ggtgetgeac ttecagteca tgtgetegtg cetgtggtac aagageegeg
                                                                         1080
                                                                         1140
164 agaaqctqca qtactccatc cccatgatca tcccgcggga cctctccacg tccqacacqt
166 gegtggagea gagecacteg tegeegggag ggggeggeeg etacagegae aegeeetege
168 gacgctgcct gtgcagcggg gcgccacgct ccgccatcag ctcggtgtcc acgggtctgc
                                                                         1260
170 acageetgte cacetteege ggeeteatga agegeaggag eteegtgtga etgeeeegag
                                                                         1320
172 ggacctggag cacctggggg cgcgggcggg ggacccctgc tgggaggcca ggagactgcc
                                                                         1380
174 cctgctgcct tctgcccagt gggaccccgc acaacatccc tcaccactct cccccagcac
                                                                         1440
                                                                         1500
176 ccccatctcc gactgtgcct gcttgcacca gccggcagga ggccgggctc tgaggacccc
178 tggggccccc atcggagccc tgcaaattcc gagaaatgtg aaacttggtg gggtcaggga
                                                                         1560
180 ggaaaggcag aagctgggag cctcccttcc ctttgaaaat ctaagaagct cccagtcctc
                                                                         1620
182 agagaccetg ctggtaccac accecacett cggaggggac ttcatgttcc gtgtacgttt
                                                                         1680
184 gcatctctat ttatacctct gtcctgctag gtctcccacc ttcccttggt tccaaaagcc
                                                                         1740
186 agggtgtcta tgtccaagtc acccctactc agccccactc cccttcctca tccccagctg
                                                                         1800
                                                                         1860
188 tgtctcccaa cctcccttcg tgttgttttg catggctttg cagttatgga gaaagtggaa
190 acccagcagt ccctaaagct ggtccccaga aagcaggaca gaaagaagga gggacaggca
                                                                         1920
192 ggcagcagga ggggcgagct gggaggcagg aggcagcggc ctgtcagtct gcagaatggt
                                                                         1980
194 cgcactggag gttcaagcta actggcctcc agccacattc tcatagcagg taggacttca
                                                                         2040
196 gccttccaga cactgccctt agaatctgga acagaagact tcagactcac cataattgct
                                                                         2100
198 gataattacc cactettaaa tttgtcgagt gatttttagc ctctgaaaac tctatgctgg
                                                                         2160
200 ccactgattc ctttqagtct cacaaaaccc tacttaggtc atcagggcag gagttctcac
                                                                         2220
202 tcccatttta cagatgagaa tactgaggcc tggacaggtg aagtgaccag agagcaaaag
                                                                         2280
204 gcaaaggggt gggggctggg tgcagtggct cacacctgta ttcccaacac ttttggaggc
                                                                         2340
                                                                         2400
206 tqaqqttqqa qqattqcttq aqcccaggaa ttcqagacca gcctaggtga catagtgaga
208 ccccatctct acaaaaaata aaaaattaac caggtgtggt ggcacgtgcc tgggagtccc
                                                                         2460
210 agcgacttgg gaggctgagg tgggaggatt gtttgagcct gggaggtcga ggctgtagtg
                                                                         2520
                                                                         2580
212 agccctgatt gcaccactgt actccagcct gggtgacagg gcaagaccct gtctcaaaaa
214 aaaaaaaaaa
                                                                         2590
217 <210> SEO ID NO: 6
218 <211> LENGTH: 19
219 <212> TYPE: DNA
220 <213> ORGANISM: artificial sequence
222 <220> FEATURE:
223 <223> OTHER INFORMATION: primer 1
225 <400> SEQUENCE: 6
226 acgtctacgc ggaggtgct
                                                                           19
229 <210> SEQ ID NO: 7
230 <211> LENGTH: 18
231 <212> TYPE: DNA
232 <213> ORGANISM: artificial sequence
234 <220> FEATURE:
235 <223> OTHER INFORMATION: primer 2
237 <400> SEOUENCE: 7
                                                                           18
238 tctcgcggct cttgtacc
241 <210> SEQ ID NO: 8
242 <211> LENGTH: 26
243 <212> TYPE: DNA
244 <213> ORGANISM: artificial sequence
246 <220> FEATURE:
247 <223> OTHER INFORMATION: probe
```

Input Set : A:\LEA 36823.txt

	<400> SEQUI						
		ccatgtgctc	gtgcct				26
	<210> SEQ ID NO: 9						
254	<211> LENG	TH: 2890					
	<212> TYPE						
256	<213> ORGAI	NISM: Homo	Sapiens				
258	<400> SEQUI	ENCE: 9					
259	ctccgtccca	ggggagaagg	agaggcgtct	gcagggggca	gagaccgcag	ctacctgccg	60
261	ggtgcgcccc	ccacccagga	gcgctcgctt	cgcccccttt	cctcccccgc	ccccacctcc	120
263	ttattggtgc	tagtttgcag	cgcccagctc	ctgcgccttc	gcttcgcgtt	tgaatctggc	180
265	tcgccccttc	gtattatgtc	tgcactccga	aggaaatttg	gggacgatta	tcaggtagtg	240
267	accacatcgt	ccagcggctc	gggcttgcag	ccccaggggc	caggccagga	ccctcagcag	300
269	cagcttgtgc	ccaagaagaa	gcggcagcgg	ttcgtggaca	agaacggccg	gtgcaatgta	360
271	cagcacggca	acctgggcag	cgagacaagc	cgctacctct	cggacctctt	caccacgctg	420
273	gtggacctca	agtggcgctg	gaacctcttc	atcttcattc	tcacctacac	cgtggcctgg	480
			gtgggtgatc				540
			ttgcgtggcc				600
			caccatcggc				660
			cctcttccag				720
			caagatgtcc				780
			ctccatgagg				840
			catggtctcc				900
			gttccttccc				960
			ttttcttgtg				1020
			cctatcccag				1080
		_	tgtggaaaca		_		1140
			ttggggtcat				1200
			ctcccagttc				1260
			ggaaatgctt				1320
			acataattct				1380
			gctgcagaaa				1440
			aacttcagaa				1500
			agttccgggc				1560
			catgagccag				1620
			taggatggaa				1680
			acaaagcact				1740
			atgaggtaat				1800
			tttgagaacc				1860
			aggacatcat				1920
			gcaaattttg				1980
			ctggaaaaaa				2040
	_	_	tatgtattaa				2100
			gtgtgtgtgt				2160
			atacatacat				2220
			gtgcatgttt		_		2280
			tttagcctta				2340
			ttgggaggct				2400
			ccctgcaaaa				2460
			agtatagcat				2520
つキエ	cccayaycat	accagtacte	agraragear	cyaacacccc	ccacyactic	caaaagccgc	2520

Input Set : A:\LEA 36823.txt

345 347 349	tagtactggg gagaaataat tgttgattaa tttgagaatt attcctttcc tagactaatt aaaatctgga aatctgttt gtatatgatc taatacaaag atgagctctg aacaaacact gaatcatgtt aatagacagt agccaagtta tattgaatat atcagaatct gtgtgaagtt acacaattaa ttgtccctgt ttcaaactga gtaaattgga aacattttct ttcttttct ggaaattttg tccattttaa aaaccaatca ttttaagaag acatgacaat gcaatgaaac	2580 2640 2700 2760 2820					
	agatgataaa tatttatgct taaaatatgt atgtctaatt gagtctcttt tttattctgt	2880 2890					
	<210> SEQ ID NO: 10 <211> LENGTH: 20						
	<212> TYPE: DNA						
361	<213> ORGANISM: artificial sequence						
363	3 <220> FEATURE:						
364	<pre>< <223> OTHER INFORMATION: primer 1</pre>						
	5 <400> SEQUENCE: 10						
	gttccacgca acatttgaag						
	0 <210> SEQ ID NO: 11						
-	<211> LENGTH: 20 <212> TYPE: DNA						
	<212> TIPE: DNA <213> ORGANISM: artificial sequence						
	<220> FEATURE:						
	<223> OTHER INFORMATION: primer 2						
	<400> SEQUENCE: 11						
379	gggacgacat gagaagcatt	20					
382	<210> SEQ ID NO: 12						
383	<211> LENGTH: 24						
	<212> TYPE: DNA						
	5 <213> ORGANISM: artificial sequence						
	<220> FEATURE:						
	<223> OTHER INFORMATION: probe						
	<400> SEQUENCE: 12	24					
	L cccaccccac cttacagtgt gaaa 4 <210> SEQ ID NO: 13						
	<211> LENGTH: 2510						
	5 <211> LENGIH: 2510 5 <212> TYPE: DNA						
397	7 <213> ORGANISM: Homo Sapiens						
	<400> SEQUENCE: 13						
	cggcggcagc agcccatgcc tccggtgcaa cagctgcgcc tcctccggtg ccccggcggc	60					
	ggggggggg gataacetgt ceetgetget eegeacetee tegeeeggeg gegeetteeg	120					
	gaccegcacc tectegeege tgtegggete gteetgetge tgetgetget getegtegeg	180					
	ccggggcagc cagctcaatg tgagcgagct gacgccgtcc agccatgcca gtgcgctccg	240					
	gcagcagtac gcgcagcagt ccgcgcagca gtcggcgtcc gcctcccagt accaccagtg	300 360					
	ccacagcetg cageeegeeg ccageeecac gggeageete ggeagtetgg geteegegee eccgeteteg caceaceace accaeeegea eccggegeac caceageace accageecea	420					
	ggcgcgccgc gagagcaacc ccttcaccga aatagccatg agcagctgca ggtacaacgg	480					
	gggcgtcatg cggccgctca gcaacttgag cgcgtcccgc cggaacctcc acgagatgga	540					
	ctcagaggcg cagcccctgc agccccccgc gtctgtcgga ggaggtggcg gcgcgtcctc	600					
	cccgtctgca gacgctgccg ccgccgccgc tgtttcgtcc tcagcccccg agatcgtggt	660					
422	gtctaagccc gagcacaaca actccaacaa cctggcgctc tatggaaccg gcggcggagg	720					
424	cagcactgga ggaggcggcg gcggtggagg gagcgggcac ggcagcagca gtggcaccaa	780					

VERIFICATION SUMMARY

DATE: 01/27/2006

PATENT APPLICATION: US/10/565,185

TIME: 15:01:24

Input Set : A:\LEA 36823.txt

Output Set: N:\CRF4\01272006\J565185.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date